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cytochrome c with gluconobacter	9

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9 L1

END OF SEARCH HISTORY

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 9 of 9 returned.**☐ 1. Document ID: US 6337199 B1

L1: Entry 1 of 9

File: USPT

Jan 8, 2002

US-PAT-NO: 6337199

DOCUMENT-IDENTIFIER: US 6337199 B1

TITLE: Membrane-bound gluconate dehydrogenase, gene sequence encoding the same and production of 2-keto-D-gluconate using transformed recombinant E-coli

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6037147 A

L1: Entry 2 of 9

File: USPT

Mar 14, 2000

US-PAT-NO: 6037147

DOCUMENT-IDENTIFIER: US 6037147 A

TITLE: Cytochrome C and polynucleotides encoding cytochrome C

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 3. Document ID: US 5804423 A

L1: Entry 3 of 9

File: USPT

Sep 8, 1998

US-PAT-NO: 5804423

DOCUMENT-IDENTIFIER: US 5804423 A

TITLE: Microbiological method of making 5-ketogluconate

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☐ 4. Document ID: JP 2001169792 A

L1: Entry 4 of 9

File: JPAB

Jun 26, 2001

PUB-NO: JP02001169792A

DOCUMENT-IDENTIFIER: JP 2001169792 A

TITLE: CYTOCHROME C OXIDASE ENZYME COMPLEX

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc	Image
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☒ 5. Document ID: JP 10327885 A

L1: Entry 5 of 9

File: JPAB

Dec 15, 1998

PUB-NO: JP410327885A

DOCUMENT-IDENTIFIER: JP 10327885 A

TITLE: CYTOCHROME C AND ITS GENE

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☒ 6. Document ID: JP 05049480 A

L1: Entry 6 of 9

File: JPAB

Mar 2, 1993

PUB-NO: JP405049480A

DOCUMENT-IDENTIFIER: JP 05049480 A

TITLE: C TYPE CHITOCHROME GENE AND OXIDATION FERMENTATION METHOD

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 7. Document ID: KR 2001051741 A, EP 1103603 A2, NO 200005799 A, AU 200071663 A, JP 2001169792 A, BR 200005443 A, CA 2324414 A1, CN 1303928 A

L1: Entry 7 of 9

File: DWPI

Jun 25, 2001

DERWENT-ACC-NO: 2001-357953

DERWENT-WEEK: 200172

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TITLE: New cytochrome c oxidase complex having cytochrome c oxidase activity from Gluconobacter oxydans DSM 4025, useful in mediating electron transfer in respiratory chain or producing 2-keto-L-gulonic acid from L-sorbose or D-sorbitol

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 8. Document ID: MX 9802646 A1, EP 869175 A2, NO 9801220 A, AU 9860639 A, JP 10327885 A, CA 2226906 A, BR 9801228 A, CN 1220314 A, KR 98081041 A, US 6037147 A

L1: Entry 8 of 9

File: DWPI

Dec 1, 1998

DERWENT-ACC-NO: 1998-508491

DERWENT-WEEK: 200024

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TITLE: New Gluconobacter cytochrome c551 polypeptides I and II - useful as electron transfer mediators and especially for producing vitamin C

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Clip Img	Image
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☐ 9. Document ID: JP 05049480 A

L1: Entry 9 of 9

File: DWPI

Mar 2, 1993

DERWENT-ACC-NO: 1993-169634

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DERWENT-WEEK: 199817

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TITLE: C-type cytochrome gene for oxidn. fermentation - comprising base sequence
coding aminoacid sequence of specified sequence NoAbstract

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWC	Draw Desc	Image
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cytochrome c with gluconobacter

Documents

9

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L1: Entry 2 of 9

File: USPT

Mar 14, 2000

DOCUMENT-IDENTIFIER: US 6037147 A

TITLE: Cytochrome C and polynucleotides encoding cytochrome C

Brief Summary Paragraph Right (1):

Cytochrome c is an essential component for mediating electron transfer between the primary dehydrogenases and the terminal oxidase for the oxidation of substrate with reduction of molecular oxygen to H.sub.2 O. This electron transfer reaction is based on an oxidation-reduction of the heme iron. Recently attempts have been made to apply the electron transfer reaction of cytochrome c as new materials imitating biological materials or elements, namely biochips; e.g. by using cytochrome c.sub.552 of Hydrogenobacter thermophilus (Kodama et al., U.S. Pat. No. 5,459,046). Acetic acid bacteria including Gluconobacter and Acetobacter possess highly efficient ability for sugar- and sugar alcohol-oxidation and are industrially used for producing vinegar and L-sorbose which is used as intermediate of vitamin C production. In oxidative fermentation, cytochrome c plays an important role to complete the oxidation. Cytochrome c proteins have been purified and characterized from many organisms, including Gluconobacter; e.g. Matsushita et al. reported the purification of CO-binding cytochrome c.sub.553 (CO) (molecular weight, 48 kDa) from Gluconobacter suboxydans (FEMS Microbiol. Lett., 10:267-270, 1981) and later the cytochrome c.sub.553 (CO) was found to be identical to the second subunit of alcohol dehydrogenase of Gluconobacter. Amplification of the cytochrome c.sub.553 (CO) in an alcohol dehydrogenase second subunit-deficient Gluconobacter slightly improved L-sorbose production from D-sorbitol in its specific rate (g-product per g-cell-hour) as disclosed in J. Ferment. Bioeng., 74, 209-213, 1992 (Y. Takeda et al.). In addition to the cytochrome c.sub.553, cytochrome c.sub.551 (AL) (molecular weight 55 kDa) and cytochrome c.sub.551 (CO) (molecular weight 72 kDa) [Ameyama et al., Agri. Biol. Chem. 51, 2943-2950 (1987)] were also isolated from Gluconobacter. The cytochrome c.sub.551 (AL) is one of the subunits of aldehyde dehydrogenase of Gluconobacter suboxydans consisting of two subunits; the other subunit is primary aldehyde dehydrogenase of 86 kDa. AL in cytochrome c.sub.551 (AL) stands for "aldehyde".

Detailed Description Paragraph Right (2):

in molecular weight; in their nucleotide sequences and amino acid sequences; and in function namely the cytochrome c.sub.551 of the present invention is a better AADH electron acceptor. It is believed that the cytochrome c.sub.551 of the present invention can function most effectively for the AADH electron acceptor among the cytochromes of Gluconobacter mentioned above in view of protein-protein interaction between a primary dehydrogenase and a cytochrome c.

Detailed Description Paragraph Right (9):

It is furthermore an object of the present invention to provide a polypeptide having cytochrome c activity and which is encoded by a DNA sequence defined above or a polypeptide having cytochrome c activity obtainable or obtained from a microorganism belonging to the genus Gluconobacter selected from the group consisting of cytochromes c.sub.551 I and II which respectively show the following physicochemical properties:

Detailed Description Paragraph Right (28):

The microorganisms used in the present invention for isolating cytochrome c of the present invention belong preferably to the genus Gluconobacter which are capable of producing cytochrome c. Functional equivalents, subcultures, mutants and variants of said microorganism can be also used in the present invention. A preferred strain is

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f Gluconobacter oxydans. A specific and preferred Gluconobacter oxydans strain has been deposited at the Deutsche Sammlung von Mikroorganismen in Gottingen (Germany) under DSM No. 4025 on Mar. 17, 1987. Moreover, a subculture of the strain has also been deposited in the Agency of Industrial Science and Technology, Fermentation Research Institute, Japan, under the stipulations of the Budapest Treaty under the deposit No.: Gluconobacter oxydans DSM No. 4025 FERM BP-3812 (date of deposit: Mar. 30, 1992). Furthermore, European Patent Publication 0278 477 discloses the characteristics of this strain.